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Author Correction: Demonstration of Shor's factoring algorithm for N = 21 on IBM quantum processors

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Correction to: *Scientific Reports* https://doi.org/10.1038/s41598-021-95973-w, published online 16 august 2021

The original version of this Article contained errors.

In the Experiments section, under the subheading 'Performance',

"However, the amplification of the peaks $|000\rangle$, $|101\rangle$ and $|110\rangle$ is clearly visible from the processor outcomes".

now reads:

"However, the amplification of the peaks $|000\rangle$, $|011\rangle$ and $|101\rangle$ is clearly visible from the processor outcomes."

In addition, under the subheading 'Factoring N = 21',

"The measured probability distributions in Fig. 7 are peaked in probability for the outcomes 000 ($\phi s = 0$), 101 ($\phi s = 5$), and 110 ($\phi s = 6$), with ideal probabilities of 0.35, 0.25 and 0.25, respectively."

now reads:

"The measured probability distributions in Fig. 7 are peaked in probability for the outcomes 000 ($\phi s = 0$), 011 ($\phi s = 3$), and 101 ($\phi s = 5$), with ideal probabilities of 0.35, 0.25 and 0.25, respectively."

Finally, under the same subheading,

"On the other hand, the continued fraction expansion of $\phi = 6/8$ gives {0,1,3/4} and incorrectly gives r = 4 as the order (see Supplementary information VII for details)."

now reads:

"On the other hand, the continued fraction expansion of $\phi = 3/8$ also gives r = 3, while adjacent outcomes that have an appreciable but lower probability do not give the correct order, for example $\phi = 6/8$ gives {0,1,3/4} and incorrectly gives r = 4 as the order (see Supplementary information VII for details)."

The original Article has been corrected.